

TWO NEW COMBINATIONS IN FLORIDA SELAGINELLAS

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ABSTRACT

New combinations at the varietal level are made for two Florida *Selaginella* species.

KEY WORDS: *Selaginella*, Selaginellaceae, Florida, nomenclature

A review of certain *Selaginella* specimens for volume one of the Flora of Florida (Wunderlin & Hansen, in press) has revealed the need for two new combinations.

Selaginella armata Baker var. *eatonii* (Hieronymus ex Small) B.F. Hansen & Wunderlin, *comb. nov.* BASIONYM: *Selaginella eatonii* Hieronymus ex Small, *Ferns Trop. Florida* 67. 1918. *Diplostachyum eatonii* (Hieronymus ex Small) Small, *Ferns S.E. States* 422. 1938. TYPE: U.S.A. Florida: Miami-Dade Co.: about lime-sinks, border of Everglades, Black Point Creek, 13 Nov 1903, *Eaton* 265 (LECTOTYPE: NY!; Isolectotypes: US,USF!). Lectotypified by Buck, *Amer. Fern J.* 68:34. 1978.

When Alston (1952) revised the West Indian species of *Selaginella*, he placed the Florida species *S. eatonii* Hieronymus ex Small in the synonymy of *S. armata* Baker. This was followed by Long & Lakela (1970) and Lakela & Long (1976). Buck (1978) recognized this taxon at the species level, pointing out that Alston had mistakenly placed *S. eatonii* in the synonymy of *S. armata*, while it is actually conspecific with *S. brucei* Hieronymus ex O.C. Schmidt of the Bahamas and Cuba. *Selaginella eatonii*, an earlier name than *S. brucei*, was separated from *S. armata* by Buck on several anatomical (e.g., stomatal arrangement) and morphological characters, the most consistent and readily observed being differences in the leaf margin. *Selaginella armata* has evident hyaline leaf margins that are ciliate, especially at the base, while the leaves of *S. eatonii* have much less evident hyaline margins that are serrate. These characters hold up well, even in the material from western Cuba, where *S. eatonii* is sympatric with *S. armata* in the Pinar del Río and La Habana provinces. However, we feel that the characters are so minor and the two taxa so

obviously closely related, that the best disposition for practicality and consistency is at the varietal level. The best classification of other Caribbean forms of *S. armata*, especially robust specimens from Hispaniola, is yet to be determined by *Selaginella* workers.

Material has been seen of *Selaginella armata* var. *armata* from Puerto Rico, Hispaniola, Jamaica, and western Cuba (Pinar del Río, La Habana), and of *S. armata* var. *eatonii* from western Cuba (Matanzas, La Habana, Pinar del Río), Florida (Miami-Dade Co.), and the Bahama Islands (Andros, Abaco, Grand Bahama).

Selaginella apoda (Linnaeus) Spring var. *ludoviciana* (A. Braun) B.F. Hansen & Wunderlin, *comb. nov.* BASIONYM: *Lycopodium ludovicianum* A. Braun, *Index Sem. Hort. Bot. Berol.* 1857, App. 12. 1858. *Selaginella ludoviciana* (A. Braun) A. Braun, *Ann. Sci. Nat. Bot.*, ser. 4. 13:58. 1860. *Lycopodioides ludoviciana* (A. Braun) Kuntze, *Revis. Gen. Pl.* 2:826. 1891. *Diplostachyum ludovicianum* (A. Braun) Small, *Ferns S.E. States* 422. 1938. TYPE: U.S.A. Louisiana: type collection unknown, to be sought at B.

The situation here is very much like that above, because Somers & Buck (1975) and Buck & Lucansky (1976) have analyzed the variation between *Selaginella apoda* (Linnaeus) Spring and *S. ludoviciana* (A. Braun) A. Braun, again separating the two taxa by anatomical and leaf margin characters. The main distinction is that the leaves of *S. ludoviciana* have an easily visible hyaline margin with 3-5 rows of transparent cells, while those of *S. apoda* are green to the margin or very near it (0-2 rows of transparent cells). Clewell (1985) considered the two conspecific, while Wunderlin (1998) treated them as distinct, as did Valdespino (1993). Once again, the two taxa are so obviously close that disposition at the varietal level seems best.

Selaginella apoda var. *apoda* occurs from Maine south to central Florida (Highlands Co.), west to Oklahoma and Texas and also in México (Chihuahua south to Chiapas), while *S. apoda* var. *ludoviciana* is found only on the Gulf Coastal Plain, in southwestern Georgia, northern Florida (south to Citrus Co.), southeastern Alabama, southern Mississippi, and southeastern Louisiana.

LITERATURE CITED

- Alston, A.H.G. 1952. A revision of the West Indian species of *Selaginella*. *Bull. Brit. Mus. (Nat. Hist.)*, Bot. 1:27-47.
- Buck, W.R. 1978. The taxonomic status of *Selaginella eatonii*. *Amer. Fern J.* 68:33-36.
- Buck, W.R. & T.W. Lucansky. 1976. An anatomical and morphological comparison of *Selaginella apoda* and *Selaginella ludoviciana*. *Bull. Torrey Bot. Club* 103:9-16.
- Clewell, A.F. 1985. *Guide to the Vascular Plants of the Florida Panhandle*. Florida State University Press, University Presses of Florida, Tallahassee, Florida.
- Lakela, O. & R.W. Long. 1976. *Ferns of Florida*. Banyan Books, Miami, Florida.

- Long, R.W. & O. Lakela. 1971. *A Flora of Tropical Florida*. University of Miami Press, Miami, Florida.
- Somers, P. & W.R. Buck. 1975. *Selaginella ludoviciana*, *S. apoda* and their hybrids in the southeastern United States. *Amer. Fern J.* 65:76-82.
- Valdespino, I.A. 1993. Selaginellaceae. *In*: Flora of North America Editorial Committee. *Flora of North America North of Mexico*. 2:38-63. Oxford University Press, New York, New York.
- Wunderlin, R.P. 1998. *Guide to the Vascular Plants of Florida*. University Press of Florida, Gainesville, Florida.